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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,268	04/05/2005	William A. Steer	GB 020171	4632

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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BRIARCLIFF MANOR, NY 10510

EXAMINER

CHOWDHURY, AFROZA Y

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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02/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/530,268

Applicant(s)

STEER, WILLIAM A.

Examiner

Afroza Y. Chowdhury

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/20/2006</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

2. Claims 5-10 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 4. See MPEP § 608.01(n). Accordingly, the claims 5-10 not been further treated on the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 11-17 are rejected under 35 U.S.C. 102(b) as being unpatentable by **Holloman** (US Patent 6,288,696).

As to claim 1, Holloman discloses an active matrix electroluminescent display device comprising an array of display pixels (fig. 3), each pixel comprising:

an electroluminescent (EL) display element (fig. 1(100));

a drive transistor (fig. 1(28)) for driving a current through the display element (fig. 1(100));

a current sampling resistor (fig. 1(30)),

wherein the EL display element (fig. 1(100)), the drive transistor (fig. 1(28)) and the current sampling resistor (fig. 1(30)) are in series between first and second power lines (abstract, figs. 1, 2, col. 5, lines 38-51); and

circuitry (fig. 1, 2) for providing a feedback signal or signals representing the voltage drop across the current sampling resistor (fig. 1(30)) to at least one feedback line (abstract, col. 2, line 63 – col. 3, line 5),

wherein the display device further comprises processing means for processing pixel drive signals in dependence on the feedback signal or signals (fig. 3, 5, col. 4, lines 54-65).

As to claim 2, Holloman teaches a device where the circuitry for providing a feedback signal or signals comprises a first sampling transistor (fig. 1(32)) connected between one terminal of the current sampling resistor (fig. 1(30)) and a first feedback line (fig. 1, col. 3, lines 6-9).

As to claim 11, Holloman teaches a method of addressing an active matrix electroluminescent display device comprising an array of display pixels, in which each pixel comprises an electroluminescent (EL) display element (fig. 1(100)),

a drive transistor (fig. 1(28)) for driving a current through the display element (fig. 1(100)) and

a current sampling resistor (fig. 1(30)) in series with the EL display element (fig. 1(100)) and the drive transistor (fig. 1(28)), the method comprising, for each pixel:

applying a drive signal (col. 2, line 63 – col. 3, line 5) to the pixel representing a desired current (fig. 1(100));

obtaining a feedback signal representing the current flowing through the display element (fig. 1(100)) by sampling a voltage on the terminals of the resistor (fig. 1(30)) in series with the EL display element (fig. 1(100), col. 2, line 63 – col. 3, line 5, col. 5, lines 38-51); and

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using the drive signal and the feedback signal to generate a modified pixel drive signal such that the current flowing is equal to the desired current (col. 2, line 63 – col. 3, line 5, col. 3, lines 19-25).

As to claim 12, Holloman teaches a method wherein using the drive signal and the feedback signal comprises differentially amplifying the signals (figs. 1, 2).

As to claim 13, Holloman discloses a method where sampling a voltage on the terminals of the resistor (fig. 1(30)) in series with the EL display element comprises tapping the voltage from each terminal to a differential amplifier (fig. 1).

As to claim 14, Holloman teaches a method wherein sampling a voltage on the terminals of a resistor in series with the EL display element comprises tapping the voltage from one terminal, the voltage on the other terminal comprising a known supply voltage (figs. 1-3).

As to claim 15, Holloman discloses a method of addressing an active matrix electroluminescent display device comprising an array of display pixels, in which each pixel comprises an electroluminescent (EL) display element (fig. 1(100)),

a drive transistor (fig. 1(28)) for driving a current through the display element (fig. 1(100)) and

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a current sampling resistor (fig. 1(30)) in series with the EL display element (fig. 1(100)) and the drive transistor (fig. 1(28)), the method comprising, for each pixel:

driving a desired current through the current sampling resistor (fig. 1(30)) and not through the display element (fig. 1(30));

obtaining a feedback signal representing the corresponding voltage drop across the current sampling resistor (col. 2, line 63 – col. 3, line 5);

storing the feedback signal (col. 2, line 63 – col. 3, line 9); and

using the stored feedback signal as a feedback control signal for subsequently driving current through the display element by applying a voltage to the gate of the drive transistor, the feedback control signal being used to determine the gate voltage (figs. 1, 2, col. 2, line 63 – col. 3, line 5, col. 5, lines 38-51).

As to claim 16, Holloman teaches a method wherein using the stored feedback signal comprises applying the stored feedback signal and a second feedback signal during driving of the display element to a differential amplifier (fig. 1), and using the differential amplifier output to control the drive transistor (fig. 1(28)).

As to claim 17, Holloman teaches a method where the second feedback signal is obtained by sampling a voltage on the terminals of the current sampling resistor (fig. 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Holloman** (US Patent 6,288,696).

As to claim 3, Holloman discloses a device wherein the circuitry for providing a feedback signal or signals comprises a second sampling transistor.

Holloman does not explicitly teach a device wherein the circuitry for providing a feedback signal or signals further comprises a second sampling transistor connected between the other terminal of the current sampling resistor and a second feedback line.

However, it would be a obvious design choice to make a display device where the circuitry for providing a feedback signal or signals comprises a second sampling transistor connected between the other terminal of the current sampling resistor and a second feedback line.

As to claim 4, Holloman teaches a device where each pixel further comprises an address transistor (16), connected between a data input line (6) and the gate of the drive transistor (22) and wherein the gates of the address transistor (16) and the or

each sampling transistor (38, 40) are controlled by a shared address line (4).


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afroza Y. Chowdhury whose telephone number is 571-270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC
2/13/2008


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